Statement by

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President, MediaFLO USA, Inc.
QUALCOMM, Incorporated

Prepared for the

Hearing on

Digital Future of the United States: Part V: The Future of Video

Before the Subcommittee on Telecommunications and the Internet
Committee on Energy and Commerce
U.S. House of Representatives

Thursday, May 10, 2007

Introduction

Good morning Chairman Markey, Ranking Member Upton, and Members of the Subcommittee. My name is Gina Lombardi, and I am President of MediaFLO USA, Inc., a wholly-owned subsidiary of QUALCOMM, Incorporated. It is an honor to appear before this Subcommittee to testify about MediaFLO and the future of video.

Let me begin by thanking the Members of this Subcommittee for your role in the enactment in 2006 of a hard date for the digital television transition. The firm date of February 17, 2009 for completion of the DTV transition has allowed innovators, such as QUALCOMM, to plan for and invest in exciting new technologies for deployment in the

spectrum that will be cleared by the broadcasters. MediaFLO, which I will discuss further in this testimony, is one such technology.

QUALCOMM Overview

MediaFLO's parent company, QUALCOMM, was founded in 1985 with a vision to innovate and develop advanced wireless services for commercial markets. Today, pursuant to that vision, QUALCOMM is a leader and innovator in the development of digital wireless technologies including those based on Code Division Multiple Access (CDMA), Orthogonal Frequency Division Multiplexing (OFDM), and other advanced digital technologies. These solutions are used for a number of communications applications, including mobile cellular, fixed wireless access, broadband wireless access, and satellite services.

The "third generation" (3G) CDMA family of wireless technologies, including CDMA2000 and WCDMA/HSPA, is used in 3G wireless networks and devices here in the United States and around the world to enable consumers to enjoy advanced, high speed, and ubiquitous wireless services. QUALCOMM broadly licenses its technology to over 140 handset and infrastructure manufacturers around the world.

Evolution of Mobile Multimedia

Today, with the digital revolution well underway, the most common distribution paths for multimedia content such as video, music, and games are traditional cable, broadcast, fiber, and satellite. The advances that have been made in wireline bandwidth, as well as computing power, have unleashed explosive consumer demand for multimedia content. These technological advances have allowed the wired Internet to deliver more data-

intensive forms of multimedia content, such as streaming video, interactive graphics like Macromedia Flash, and digital audio.

The mobile Internet is also evolving, and we believe, represents the next frontier in the delivery of multimedia content. In a relatively short period of time, we have seen upgrades in the cellular networks from the data speeds of 9.6 kbps in wireless networks of just a few years ago to today's 3G networks, such as those based on CDMA2000 1xEV-DO and WCDMA/HSPA, which provide high speed, fully mobile broadband service at data rates comparable to DSL and cable. Today, there are 268 wireless carriers in 110 countries who have deployed one of the 3G CDMA technologies. Worldwide, there are over 441 million subscribers using a 3G CDMA device, and these devices are proliferating at a very rapid rate in wireless markets around the world. In the last 12 months alone, 93 devices using 3G CDMA have been brought to market by 28 different device manufacturers. The dramatic increases in computing power, memory and high-end graphics functionality have accelerated the development of new and exciting wireless services.

QUALCOMM believes there is significant consumer interest in mobile multimedia services, including video, both in the United States and in other countries around the world. Independent market research supports this view. For example, ABI Research estimates that there will be 250 million mobile video users worldwide by 2010, and the Yankee Group estimates the market for mobile video will be $11 billion by 2010.[1]

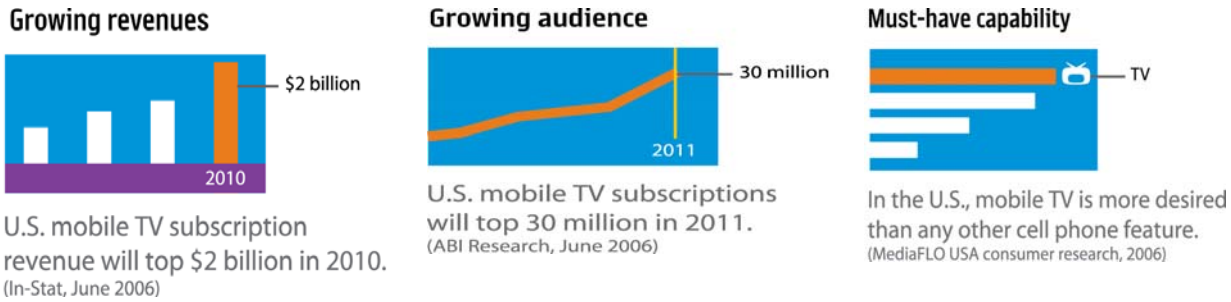
[1] Allied Business Intelligence Inc., June 2006; "Mobile Video/Broadcast TV Market Assessment: Will Operators Get the Picture Right," Yankee Group, November 2006.

In addition, we at MediaFLO USA have conducted our own consumer research encompassing more than 4,000 consumers across the United States. This research revealed that consumers' desire for mobile TV outstrips any other cell phone feature. Specifically, we found that:

- 1.5 times as many cell phone users would prefer video to a camera.
- 1.6 times as many users would prefer video to an Internet connection.
- 2.3 times as many preferred video to push-to-talk.
- 3 times as many preferred video to instant messaging.
- 6 times as many preferred mobile TV to games.

Figure 1.

The Next Big Thing



In addition, MediaFLO has conducted a number of focus groups to better understand the role that mobile TV will play in viewers' lives. We found that the audience for mobile TV encompasses both men and women over a wide range of ages who have an interest in many genres of TV content, including children's programming and specialty programs, in addition to news and sports. Our focus groups also found that consumers are interested in watching mobile TV during planned and unplanned breaks, such as on their lunch hour and while waiting to pick up their children, as well as during planned downtime, such as

commuting. One interesting use we found is parents who, while grocery shopping and driving, gave the phone to their children to occupy them. In fact, perhaps for that very reason, our research indicated that consumers are interested in full-length content of 30 minutes or more, not just 5 or 10 minute clips.

Our focus group findings show great promise for mobile video and contrast starkly with what has been the conventional wisdom regarding mobile video to date.

Consumer multimedia, however, poses a unique challenge in the wireless environment. In particular, the cost to deliver these data-rich services makes profitability especially challenging. QUALCOMM put considerable thought to these issues, and has devised a unique solution for mobile multimedia to address considerations of quality, consumer experience and cost. Our technical know-how, combined with favorable policies adopted in the U.S. for spectrum that have fostered a climate of innovation has led to this exciting development.

MediaFLO

MediaFLO was designed literally from the ground up to address the unique technological and economic requirements for delivering high quality mobile multimedia content to mobile phones at mass market prices. Our system aggregates and delivers premium, TV-quality information and entertainment services to mobile phones over a dedicated, nationwide wireless network. The user experience with MediaFLO is dramatically different from other mobile multimedia services on the market today, due to its faster channel switching, superior picture quality, and longer battery life.

As we have disclosed previously, we estimate that we will invest approximately $800 million in MediaFLO, including providing the funding for the necessary research and development, network infrastructure costs, and in designing, building, and operating a system uniquely suited to deliver high quality video content to mobile phones. Our business began with the purchase of spectrum licenses in an auction conducted by the FCC in 2003. The FCC auctioned a portion of the UHF band (referred to as the "Lower 700 MHz") and applied flexible technical and service rules to this band, including allowing up to a 50 kW transmit power to facilitate new operations, such as MediaFLO. We hold licenses for 6 MHz on UHF Channel 55 (716 – 722 MHz) covering the entire nation.

With the enactment of the Digital Television Transition and Public Safety Act of 2005, this spectrum will become fully available to new licensees such as QUALCOMM in February 2009. In the meantime, we are permitted to operate in certain markets, provided we do not cause harmful interference to incumbent TV stations on the same or immediately adjacent channels, or if we reach agreement with an affected TV station subject to FCC approval. UHF spectrum is well suited to mobile TV because of its inherently favorable radio propagation signals and the higher power levels allowed compared to traditional cellular frequency bands. These factors allow us to keep our costs down, so that our service can be sold to consumers at mass market prices.

MediaFLO USA has deployed a nationwide network based on our FLO (Forward-Link-Only) technology, a new mobile broadcast air interface that QUALCOMM invented for mobile television. FLO is designed and optimized to increase capacity and coverage, while reducing the cost of multimedia content delivery to mobile handsets. In the same

way that TV is aired to many households at once, MediaFLO USA distributes programming to many mobile phones simultaneously. This means that, no matter how many people are watching, the signal quality is excellent.

Our network consists primarily of high power, high tower transmitters, re-using, in most cases, existing tall towers to optimize network cost and design. Our prime frequency band, together with the inherent efficiency of the FLO technology, means that our network is using a fraction of the number of transmitters that a cellular system would require at either 800 MHz or 1.9 GHz, thereby enabling the delivery of mobile TV service to consumers at mass market prices.

Figure 2 below shows an example of how the FLO technology is deployed.

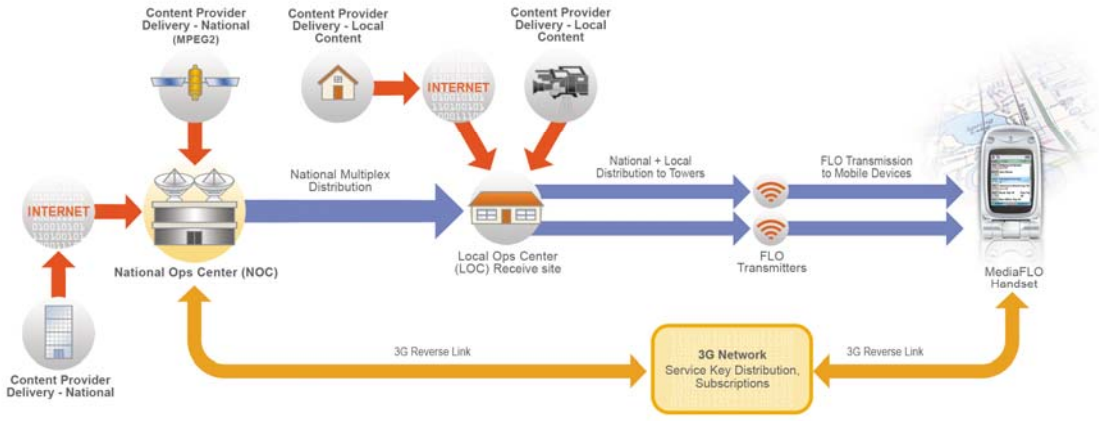


Figure 2.

MediaFLO USA is delivering our services as a wholesaler to wireless carriers. We have contracted with major broadcast and cable networks and content providers (e.g., ESPN, CBS, Fox, NBC and Viacom), to deliver their content, which includes news, entertainment, sports, and children's programming. We also hope to offer local content,

such as local news, sports, weather, and other programming as the service evolves and expands.

MediaFLO USA has entered into commercial agreements with both CDMA and GSM/WCDMA wireless carriers, whereby such carriers have agreed to offer the MediaFLO mobile TV service to their subscribers on a retail basis. To date, MediaFLO USA has entered into these agreements with the top two wireless carriers in the United States – Verizon Wireless and AT&T/Cingular. These two carriers combined have over 120 million wireless subscribers. The availability of the MediaFLO network and service on a retail basis is determined by our wireless operator partners.

On March 1st 2007, Verizon Wireless began offering commercial mobile TV services under the brand name "V CAST Mobile TV" to its subscribers using the MediaFLO USA network. As of today, this service is available in a total of 27 major markets, including Dallas – Fort Worth, Seattle, Los Angeles, Orlando, Atlanta, and Chicago. AT&T has also announced plans to launch commercial MediaFLO services later this year.

MediaFLO has been designed to replicate the traditional TV viewing experience for the mobile environment. MediaFLO subscribers have access to an easy-to-use program guide on their phones, from which they can select a wide range of programming options. No buffering is required to access the content; a simple push of a button activates the programs. Further, consumers can accept calls and messages on their phones without interrupting the programs. The service gives content providers a major new distribution channel that complements their current offerings. Consumers are gaining access to compelling multimedia services when and where they want them.

A video is being provided as part of my oral testimony to provide a visual demonstration of how MediaFLO operates.

The Importance of the DTV Hard Date

As I mentioned, MediaFLO USA is being launched on Channel 55, in the UHF spectrum. This spectrum will be cleared by the broadcasters according to the provisions of the Digital Television Transition and Public Safety Act of 2005 (P.L. 109-171). This Subcommittee is to be commended for its foresight in advancing this critical legislation, which is aimed at putting the vacated 700 MHz band to its highest and best use, and creating a climate in which innovators can plan for the uses of this valuable, "beachfront" spectrum. In addition to the exciting new commercial services, such as MediaFLO, that will result from this auction, public safety will gain access to the 24 MHz of spectrum that has already been allocated, creating opportunities for improving interoperability and deployment of new wireless broadband capabilities. Finally the auction of the 60 MHz of unassigned spectrum will generate billions of dollars for the federal Treasury.

As I noted above, we estimate that QUALCOMM will invest approximately $800 million to bring this new technology to market in reliance on Congress's commitment that the DTV transition will end once and for all on February 17, 2009, so that we will then be able to use our spectrum fully, all over the country. The single most important thing that this Congress can do to ensure that consumers receive the full benefit of compelling new services such as ours is to keep faith with the many innovators such as MediaFLO USA who have invested heavily based on that commitment. Moreover, to fulfill the statutory commitment to the February 17, 2009 hard date for the end of the DTV transition, it is

essential that the unassigned spectrum be auctioned on the statutory schedule so that the funds to carry out the DTV transition are collected in time.

Conclusion

Mr. Chairman and Members of the Subcommittee, one of the key benefits from the release of the 700 MHz spectrum is mobile video. The world is at the beginning of a revolutionary change in this exciting new service, with many possibilities for increasing consumer choice. As has been the case in many of our technological advancements, the U.S. is a world leader in the market. Policies pursued by this Subcommittee, in particular the decision to enact a hard date for the digital television transition and to release the commercial spectrum, are helping to assure our continued position as a world leader in technology advancement.

Thank you for the opportunity to appear today, and I look forward to any questions you may have.

Attachment

Summary of Written Testimony

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